REMARKS/ARGUMENTS

Applicants received the Office Action dated November 7, 2003, in which the Examiner rejected all pending claims (claims 1-10) as allegedly anticipated by Cherabuddi (U.S. Patent No. 6,496,917). Applicants traverse the rejections for the following reasons and also add new claims 11-16. Applicants respectfully request reconsideration and allowance of the pending claims.

In general, a cache directory provides cache coherency information (e.g., valid, shared, exclusive) about the state of a block of data. This state information is updated from time to time as the cache state of the block changes. The invention of claim 1 relates to speculatively updating the cache state. Claim 1 is directed to a computer system in which, among other features, a "coherence directory." Further, as claimed, a "Home processor node" receives a request for a data block, forwards the request to an Owner processor node, and "performs a speculative write of the next directory state to the coherence directory for the data block without waiting for the Owner processor node to respond to the request." Thus, claim 1 requires the Home processor node to speculatively write the cache directory before the Owner processor node responds to the request.

Cherabuddi does not teach or even suggest any of these limitations. Cherabuddi lacks any teaching or suggestion of a cache directory. Consequently, Cherabuddi does not disclose speculatively writing a cache directory. Cherabuddi does disclose routing an address request to primary memory as a "speculative request." See Abstract and col. 3, lines 5-10. This is different than speculatively writing a cache directory. At least for these reasons, claim 1 and associated dependent claims are patentable over Cherabuddi.

Claim 5 also requires a "speculative write of the next directory state to the coherence directory...without waiting for the second processor node to respond to the request." For at least the reasons articulated above regarding claim 1, claim 5 and associated dependent claims are allowable over Cherabuddi.

Claim 10 also requires a "speculative write of the next directory state to the coherence directory...without waiting for the Owner processor node to respond to

the request." For at least the reasons articulated above regarding claim 1, claim 10 is allowable over Cherabuddi.

New independent method claim 11 requires "receiving a request for a data block, forwarding the request to an owner node at which an updateable directory state of the data block is stored, and speculatively writing the directory state before receiving a coherence response from the owner." Cherabuddi does not teach or suggest this combination of limitations. Thus, claim 11 and associated dependent claims 12 and 13 are allowable over Cherabuddi.

New independent apparatus claim 14 requires "memory in which a directory table is stored, the directory table including an configurable cache state associated with the data block; and a cache controller that speculatively updates the data block's cache state in the directory table upon receiving a memory request and before the apparatus receives a coherence response from the owner node." Cherabuddi does not teach or suggest this combination of limitations. Thus, claim 14 and associated dependent claims 15 and 16 are allowable over Cherabuddi.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

Applicants respectfully request that a timely Notice of Allowance be issued in this case. If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-

Appl. No.: 09/652, 834
Amdt. dated February 3, 2004
Reply to Office action of November 7, 2003

Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

Respectfully submitted,

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